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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,512	10/17/2001	Rusi P. Taleyarkhan	6321-202	6895

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EXAMINER

PALABRICA, RICARDO J

ART UNIT	PAPER NUMBER
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3663

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/981,512

Applicant(s)

TALEYARKHAN, RUSI P.

Examiner

Rick Palabrica

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20, 21 and 23-75 is/are pending in the application.
- 4a) Of the above claim(s) 3-9, 11-13, 15 and 23-75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10, 14, 16-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's 3/5/07 Amendment, which amended claims 1, 2, 10, 16 and 20, canceled claims 19 and 22, amended the specification, submitted replacements for Figs. 1, 4 and 6, and traversed the rejection of the claims in the 11/3/06 Office action, is acknowledged.

Claims 3-9, 11-13, 15, and 23-75 remain withdrawn from consideration. Claims 1, 2, 10, 14, 16-18, 20 and 21 are examined in this Office action.

2. Applicant asserts that the references at the end of the specification are not prior art but to provide support for selected portions of the disclosure. Applicant may not consider them prior art but the examiner can still apply them as prior art, where they are appropriate.

3. Applicant argues that the amended claims define over either one of applied art, Flynn and Putterman. Applicant's traverse is on the grounds that neither Flynn nor Putterman discloses or suggests: a) a "degassed liquid"; b) "the claimed fundamental particles which as noted above are well known in the art to be particles which make up the nuclei of all atoms, such as neutrons and alpha particles, nor do they sufficient energy to cause nucleation since they have only their thermal energy (about 0.01 eV)." The examiner disagrees.

As to argument a):

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First, the claims are directed to an apparatus and not to a process. Claim 1, for example, recites the limitation,

"structure for placing at least a portion of a degassed liquid into a tension state."

As presently set forth, this claim does not qualify for interpretation under 35 U.S.C. 112, 6th paragraph because it does not have the required "means-plus-function" format. Thus, structural element in the claim is "structure". The so-called "degassed liquid", is part of a statement of intended use that does not serve to patentably distinguish the claimed structure over that of the reference, as long as the structure of the cited references is capable of performing the intended use. See MPEP 2111-2115.

See also MPEP 2114 that states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531.

[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Flynn

Flynn discloses in Fig. 1 a "structure", i.e., housing 12, shield 21 and acoustic horns 30 that is capable of placing at least a portion of a degassed liquid (i.e., host liquid lithium) into a tension state. Thus, Flynn is capable of being used in the same

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manner and for the intended or desired use as the claimed invention. Note that it is sufficient to show that said capability exists, which is the case for the cited references.

Second, Flynn discloses a “degassed” host liquid, as evidenced by his statement:

“Preferably, this host liquid is purified of all gases, before the H-isotopes are introduced. The reaction chamber 11 is likewise degassed, further helping to reduce corrosion of its walls.” Underlining provided. See col. 16, lines 19+.

Putterman

Putterman discloses in Fig. 13 a “structure”, i.e., a spherical quartz flask and piezoelectric transducers (PZT) that is capable of placing at least a portion of a degassed liquid (i.e., water) into a tension state. Thus, Putterman is capable of being used in the same manner and for the intended or desired use as the claimed invention. Note that it is sufficient to show that said capability exists, which is the case for the cited references.

Putterman discloses a “degassed” liquid, as evidenced by his statement:

“In a preferred form of the invention the liquid is sealed in the container prior to the formation of a gaseous bubble in the liquid. The liquid is preferably degassed, and the container is sealed against the ingress or egress of fluid, namely liquid and/or gas.” Underlining provided. See col. 1, last paragraph.

As to argument b):

First, applicant’s own example of “alpha particles” being “fundamental particles”, contradicts his definition of the term. Alpha particles do not “make up the nuclei of ALL atoms.” Hydrogen and beryllium atoms, for example, do have alpha particles in their nuclei.

Second, either one of Flynn's or Putterman's apparatus includes fundamental particles such as fast neutrons that are released by the fusion reactions (see col. 3, lines 64+ in Flynn or col. 22, lines 18+ in Putterman).

Third, nowhere in either Flynn or Putterman does either one state that his neutrons only have the alleged "0.01 eV" thermal energy. Flynn's or Putterman's neutrons are fast neutrons because they are the direct results of fusion reactions. Additionally, Flynn's or Putterman's fusion reactions cannot occur at the applicant's alleged "ambient temperature". See Flynn's discussion on "Operating Temperature" on cols. 7 and 8, or Table I and col. 3, lines 1+ in Putterman.

4. Applicant argues that his claimed invention has utility and operability in view of the examples he cites (see page 21 of the 3/5/07 Amendment). The examiner disagrees. There is no showing in examples cited by the applicant that these so-called experiments using neutrons for cavitation are identical to the claimed invention. For example, none of the experiments recite the liquid being degassed. Also, none of the cited experiments provide objective evidence that the energy stored in the liquid's tension state is released no more than 1.0 μ sec following receipt of cavitation energy from said source of fundamental particles.

Applicant alleges that the claimed invention produces a net power surge. None of the experiments provide objective evidence that inherent inaccuracies in the measurements that could lead to incorrect conclusion or improper interpretation of the results have been taken into account. It is particularly pointed out that "reproducibility"

must go beyond one's own lab. One must produce a set of instructions, a recipe that would enable anyone in their own independent lab to produce the same results. If reproducibility only occurs in one's own lab, errors (such as systematic errors) would be suspect. There is no showing that applicant's conclusion of net power surge has been independently verified or reproduced.

Specification

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to provide an adequate written description of the invention and as failing to adequately teach how to make and/or use the invention, i.e. failing to provide an enabling disclosure.

Applicant asserts that the claimed burst generator provides power surges above the drive source (e.g., see paragraph 0122). As stated in section 4 above, and set forth further below, the disclosure does not contain reputable evidence that is sufficient to support any allegations or claims that the invention produces excess power surge, nor that they are reproducible and/or sustainable.

The disclosure is thus insufficient and non-enabling as to exactly what all is necessary to actually present a reproducible, sustainable excess power surge, and, as to what would cause such excess power to actually take place in the applicant's system.

Applicant's claimed apparatus is identical to that of Louks et al. (U.S. 6,726,743), who discloses an electrostatic deaeration apparatus. He shows in Fig. 5 a structure 66 for placing a degassed liquid 52 into a tension state by an acoustic generator (see col. 7, lines 60+). He subjects the liquid to charged particles from a corona wire 64. (Examiner's note: Applicant has not defined the degree of degassing of the liquid, and absent this definition, the examiner interprets the term broadly and reads it on either partially or fully degassed liquid. Louks et al.'s liquid 52 is inherently at least partially degassed because of the flask 50 being an open container.)

Since the structure and operation of Louks et al.'s apparatus is the same as that recited in the claims, the reference must each inherently function in the same manner to produce the same results as applicant's situation. As to limitations which are considered to be inherent in a reference, note the case law of In re Ludtke, 169 USPQ 563, In re Swinehart, 169 USPQ 226, In re Fitzgerald, 205 USPQ 594, In re Best et al., 195 USPQ 430, and In re Brown, 173 USPQ 685, 688.

There is accordingly, neither an adequate description nor enabling disclosure of how and in what manner, applicant's invention is able to produce excess power surge, while the identical system and method of Louks et al., presumably did not produce said excess power surge.

Assuming for the sake of argument that applicant's invention does function in a different manner to produce a different result from that of Louks et al., it can only be

because applicant's invention actually contains some additional critical feature(s), component(s), etc., not found in said reference which is necessary to enable applicant's invention to function differently from any of said reference so as to be able to produce a different result.

Accordingly, the disclosure is insufficient in failing to disclose said additional critical feature(s), component(s), etc., necessary to cause applicant's invention to operatively function in a different manner to produce a result different from that of said reference.

Clearly, when an artisan or experimenter is relying on the experimental results of particular tests or experiments to establish certain facts, i.e., the production of excess power surge, it is incumbent upon the experimenter to show that the alleged experimental results of excess power, are valid and not just the results of experimental errors or misinterpretations of experimental data (and that the alleged experimental results do not fall within the limits of experimental errors).

There is thus no reputable evidence of record to support the assumption and speculation that the invention would actually operate as indicated and produce the desired results as indicated.

It is not seen wherein the specification discloses any particular structure, etc., which is unique to the applicant's system and which would make the applicant's system operative whereas the system disclosed in the above reference is not operative.

There is neither an adequate description not enabling disclosure of the parameters of a specific operative embodiment of the invention, including the exact composition (including the impurities and amounts thereof) of the acetone, the operating pressure and spin rate for acetone, amount of dissolved gases in the acetone, specific geometry and surface conditions of the structures surrounding the acetone, etc.

Impurities can have an adverse effect on the desired operation of the invention, as applicant himself admits that impurities can make a liquid unsuitable for the invention (e.g., see page 19+).

As set forth above, the examiner has presented evidence showing that in such system as the applicant's, the claims of excess power surge, are not reproducible or even obtainable. While applicant may have set forth theoretical concepts, it is well known in the scientific field that theory and reality have a habit of not coinciding. There is no evidence to indicate that the applicant has so succeeded where others have failed, in arriving at an excess power surge system, i.e. that he has progressed his system beyond the point of an unproven theory or concept that still requires an undue amount of experimentation to enable the artisan to make and use the inventive system for its indicated purpose. This view is also considered supported by the failure to set forth a full example of the specific parameters of an operative embodiment. One cannot rely on the skill in the art for the selection of the proper quantitative values to present an operative cold fusion system, since those in the art do not know what would be these values. See Bank v. Rauland Corp., 64 U.S.P.Q. 93; In re Corneil et al., 145 U.S.P.Q. 697.

To reiterate briefly, the examiner has presented evidence that generation of excess power surge can reasonably be expected to be reproducible or even obtainable with the present invention.

It is thus considered that the examiner (for the reasons set forth above) has set forth a reasonable and sufficient basis for challenging the adequacy of the disclosure. The statute requires the applicant itself to inform, not to direct others to find out for themselves; In re Gardner et al, 166 U.S.P.Q. 138, In re Scarborough, 182 U.S.P.Q. 298. Note that the disclosure must enable a person skilled in the art to practice the

invention without having to design structure not shown to be readily available in the art;
In re Hirsch, 131 U.S.P.Q. 198.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1, 2, 10, 14, 16-18, 20 and 21 are rejected under 35 U.S.C. 101 because the claimed invention as disclosed is inoperative and therefore lacks utility.

The reasons that the inventions as disclosed is inoperative are the same as the reasons set forth in section 5 above as to why the specification is objected to and the reasons set forth in section 5 above are accordingly incorporated herein. See also section 4.

There is no reputable evidence of record to indicate the invention has been reduced to the point of providing in current available form, an operative excess power surge system. The invention is not considered as meeting the requirements of 35 U.S.C. 101 as being "useful".

The applicant at best, has set forth what may be considered a concept or an object of scientific research. However, it has been held that such does not present a utility within the meaning of 35 U.S.C. 101. See Brenner v. Manson, 148 U.S.P.Q. 689.

Additionally, it is well established that whereas here, the utility of the claimed invention is based upon allegations that border on the incredible or allegations that

would not be readily accepted by a substantial portion of the scientific community, applicant must submit sufficient substantiating evidence of operability. Note In re Houghton, 167 U.S.P.Q. 687 (CCPA 1970); In re Ferens, 163 U.S.P.Q. 609 (CCPA 1969); Puharich v. Brenner, 162 U.S.P.Q. 136 (CA DC 1969); In re Pottier, 152 U.S.P.Q. 407 (CCPA 1967); In re Ruskin, 148 U.S.P.Q. 221 (CCPA 1966); In re Citron, 139 U.S.P.Q. 516 (CCPA 1963); and In re Novak, 134 U.S.P.Q. 335 (CCPA 1962).

Claim Rejections - 35 USC § 112

7. Claims 1, 2, 10, 14, 16-18, 20 and 21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The reasons that the inventions as disclosed are not enabling are the same as the reasons set forth in section 5 above as to why the specification is objected to and the reasons set forth in section 5 above are accordingly incorporated herein. See also section 4.

8. Claims 1, 2, 10, 14, 16-18, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and incomplete.

As indicated in section 5 above, Louks et al. illustrate an apparatus that is identical to that recited in said applicant's claims. Applicant's disclosure indicates that

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his apparatus results in the generation of excess power surge. Assuming for the sake of argument that Louks et al.'s system is not capable of producing such excess power surge, applicant's claims are incomplete in failing to recite the additional critical structure and/or method steps (not found in Louks et al.) that are actually necessary to produce applicant's indicated excess power surge.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by either one of Putterman et al. (U.S. 5,659,173) or Flynn (U.S. 4,333,796).

The reasons are the same as those stated in section 9 of the 11/3/06 Office action, as further clarified in section 3 above, which reasons are herein incorporated.

10. Claims 16-18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Putterman et al.

The reasons are the same as those stated in section 9 of the 11/3/06 Office action, as further clarified in section 3 above, which reasons are herein incorporated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Putterman et al. or Flynn, in view of Taleyarkhan et al. (IDS Ref. 6). Putterman et al. or Flynn disclose the claim limitations except for the centrifugal source.

The reasons are the same as those stated in section 11 of the 11/3/06 Office action, as further clarified in section 3 above, which reasons are herein incorporated.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 571-272-6880. The examiner can normally be reached on 6:00-4:30, Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RJP
April 5, 2007


RICARDO J. PALABRICA
PRIMARY EXAMINER